

STUDIES IN NEOTROPICAL SENECIONEAE IV.  
NEW TAXA IN *SENECIO* AND *CABRERIELLA*

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*Abstract.*—Two new species of *Senecio* (Compositae) from Peru are described. *Senecio dolichodoryius* from Chachapoyas belongs to section *Dendrophorbium*, and its relationship with the other members of the section are discussed; *S. kingsbishopii* is closely related and differentiated from *S. flaccifolius* Wedd. Also, a transfer of *S. oppositicordius* to *Cabreriella* is made.

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*Senecio dolichodoryius* Cuatr. sp. nov.

Frutex ad 3 m alta caule ramisque viridibus medullosis. Rami terminales valde foliosi erecti vel ascendentes subteretes moderate striati intus medullosi extus pilis minutis patulis vel antrorsis plus minusve copiosis muniti et cum velo tenuiter membranaceo hyalino fragile ad modum squamarum partiale deciduo. Folia alterna crasse coriacea petiolata. Laminae longi-lanceolatae basi paulo angustatae subacutae vel subobtusae, vel praecipue distales acute cuneatae, ad apicem longi-attenuatae acutissimae, (16-)19-38 × (2.6-)2.9-7.6 cm, ratio (4.2)5-6.5(-7.3): 1; margine argute dentatae dentibus triangularibus subacutis 0.7-1 mm longis cum minoribus 0.3-0.5 mm longis alternantibus, 2-4 inter se distantibus, apice callosocrassato submucronato (glanduloso); adaxiale virides tactu laeves, minutissime scrobiculatae, costa subplana bene notata nervis secundariis fere obsoletis, superficie glabra sed velo hyalino fragile irregulariter secedenti, ad costam sparsis pilis minutis glandulosis; abaxiale itidem squamoso-velatae visu argute discolore nervatae, costa valde prominenti striata laevi glabra sed hyalino-squamosa, nervis secundariis patulo-ascendentibus angustis sed prominentibus prope marginem curvatis tenuioribusque anastomosantibus, nervis alternantibus intermediis brevioribus, venulis minoribus in reticulum valde conspicuum prominulum minute polygonalem anastomosatis; nervatio omnis brunnescens pseudo-pilosula cum squamis piliformibus irregularibus plus minusve tecta; alveolae pallidae planae laeves cereae. Petiolus 2-4.7 cm longus robustus sursum subplanus deorsum canaliculatus, abaxiale striatus, basi triangulare ampliatus et amplectens, ubique velato-squamosus.

Synflorescentiae monotelicae terminales corymboso-paniculatae, 15-30 cm longae, foliosae floribundae folia suprema paulo excedentes. Rami alterni robustiusculi striati proximales saepe valde longi ascendenti-fastigiati ceteri erectopatenti omnes hyalini-squamosi et plus minus sparse minute crassi-pilosuli. Ramuli numerosi ramificati striolati minute puberuli pilis subpatulis vel ascendentibus, ultimi teneri sed erecti. Pedicelli graciles longiusculi 5-30 mm longi recti vel paulo flexuosi. Folia subtendentia proximalia quam folia sterilia similissima, sursum gradatim breviora; bractee in ramis secundariis inferne foliaceae sursum bracteosae, lanceolatae in ramulis ultimis lanceolato-lineares acutissimae minute puberulae 5-1.5 mm longae.

Capitula cylindracea 9-11 mm longa radiata circulo ligulari expanso 16-20 mm diam. Involucrum cylindricum vel cylindro-campanulatum 6.5-7.5 mm altum 5-6 mm diametro, explanatum 14-16 mm diam. Phyllaria 13-12 in capitulo;

exteriora 6–7 mm longa 1.2–1.5(–2) mm lata, oblonga sursum attenuata acuminata apice acutissimo dorso crasso margine anguste membranaceo ad apicem papilloso-pilosulo papillis longiusculis saepe pyriformibus; interiora 5.5–6 mm longa 2–4 mm lata elliptica apice angustata acutaque dorso valde protrudo crasso marginibus late hyalino-membranaceis, omnia apice papilloso-pilosulo excepto glabriuscula. Bracteolae calyculares 4–6 herbaceae lineares acutae parce puberulae pilis minutis crassis apice papillosae, 1–4 mm longae, ad basim involucri et apicem pedicelli affixae. Receptaculum planum glabrum 3(–4) mm diam. alveolatum alveolis pentagonalibus moderate profundis marginibus ad angulos elevato-dentatis.

Flores radii ligulati 11–13. Corolla lutea 10–12 mm longa glabra, tubo 3.5–4.5 mm longo angusto ad faucem annulare incrassato, lamina 1.8–2.5 mm lata elliptica vel oblongo-elliptica basim attenuata apice obtusa minute 2–3-denticulata, conspicue 4-nervata nervis croceis notatis, adaxiale superficie mamillata. Stylus ramis circa 1.5 mm longis, faucem corollae paulo excedentibus lineis stigmaticis crassis conniventibus apice obtuso cum papillis crassioribus.

Flores disci hermaphroditi 20–36. Corolla lutea tubulosa glabra 6.5–7.5 mm longa, tubulo 3–3.5 mm, limbo tubuloso distale leviter ampliato, commisurale nervato, lobis oblongo-triangularibus mediale cum vena conspicua 1–1.2 mm longis apice incrassato papillosoque papillis crassis obtusis seu pyriformibus. Antherae 2.2–2.4 mm longae appendice apicale oblonga, lobis basi anguste breviterque auriculatis, cellulis endothecialibus oblongis in parietibus lateralibus seriate noduliferis. Collum 0.4–0.5 mm longum cum filamentum valde crassius plus minusve lageniforme dilatatum cellulis subquadratis multiseriatis. Stylus 7–7.5 mm longus ramis circa 1.5 mm recurvis marginibus lineis stigmatibus duobus valde crassis adaxiale conniventibus, apice obtuso cum papillis crassulis paulo dilatato.

Ovaria circa 1.5 mm longa oblongo-ellipsoidea glabra conspicue 5-costata costis ductis resiniferis lutescentibus. Pappus albus 4.5–5 mm longus pilis strictis scabridis acutis 2–3-seriatis basi connatis.

*Type*. — Peru, Depto. Amazonas, Pcia. Chachapoyas: middle eastern Calla-Calla slopes, near km 411–416 of Leimabamba-Balsas road, 3100–3250 m, herb 1–3 m tall, locally frequent; rays and disc yellow; 11 Jul 1962, *J. J. Wurdack 1306* (US, holotype).

*Other collections*. — Peru, Depto. Amazonas, Pcia. Chachapoyas: Cerros Calla-Calla, 18 km above Leimabamba on road to Balsas, 3000 m, open forest below road ca. 1 km downhill from km 410, swampy, single stems 1½–2 m, rays golden yellow, 16 Jun 1964, *Hutchison & Wright 5684* (UC, paratype); 11 kms along road ascending mountain SE of Chachapoyas, 8700 ft., large shrub 3 m tall with rank odor, 20 Jan 1983, *Robert M. King & L. Earl Bishop 9261* (US, paratype); 58 km NE of Balsas on road to Chachapoyas, ca. 3400 m, shrub to 2 m, flowers yellow, 5 Jan 1979, *M. Dillon & B. L. Turner 1734* (US).

*Remarks*. — *Senecio dolichodoryius* belongs to section *Dendrophorbium* and is characterized by the combination of its leathery large, long-lanceolate, petiolate, minutely bidentate leaves which are adaxially smooth, by the radiate capitula of 13–12 medium-sized (6–7 × 1.8–4 mm) phyllaries, and by the similar size of disk corollas (7–7.5 mm). The branchlets and terminal inflorescences are very shortly puberulous with the cuticular velum or film covering almost every vegetative part at least at the earlier stage. This fragile film becomes fragmented and

partially caducous and disintegrates, producing a kind of irregular, spreading pseudo-pubescence on the abaxial surface of the leaves.

The other species of the section can be easily distinguished from the new species as follows. The Bolivian species *S. tabacifolius* Rusby and *S. cabreræ* Cuatr. (including *S. myrianthus* Klatt, a discarded later homonym), have involucre with eight phyllaries and the first has, in addition, tuberculate, scabrous leaves. The Peruvian *S. castanaefolius* DC, and *S. submultinervis* Cuatr. and the Ecuadorian *S. ingens* Benoist have the involucre with 9–10 smaller phyllaries (3.5–5.5 mm). Two other Bolivian species, *B. conocephalus* Cabrera and *S. longilinguæ* Cuatr., can also readily be separated by the 8-merous involucre, in addition to their sessile leaves. Among the majority of species with 13 (12–14) phyllaries there are the Bolivian *S. biserrifolius* Ktze. and *S. ayapoyensis* Cuatr. and the Peruvian *S. sandemanii* Cuatr. and *S. tergopurpureus* Cuatr. which have sessile leaves. The Colombian *S. moscopanus* Cuatr., *S. sibundoyensis* Cuatr. and *suazaensis* Cuatr. have leaves with broadly auriculate bases. *Senecio tipocochensis* Domke and *S. balsapampæ* Cuatr. from Ecuador, *S. fortunatus* Cuatr. from Peru and *S. arboluco* Cuatr. from Colombia have involucre only 2.5–3.5 mm long. Conversely, *Senecio lloensis* of Ecuador is characterized by larger capitula with phyllaries 10–9 mm long. Of *S. chingualensis* Cuatr. and *S. dielsii* Domke, with 6–7(–8) mm long phyllaries, the first has rather thinner, broader and pubescent leaves and broad phyllaries, while the second possesses thicker, stronger branchlets and leaves with a scabrous upper surface, thicker capitula, harder phyllaries and overall white lanugineous, arachnoid indument. The remaining species *S. pururu* Cuatr. (Ecuador), *S. silvani* Cuatr. (Col.), *S. goodspeedii* Cuatr. (Peru), *S. multinervis* Sch. Bip., *S. unduavianus* Cuatr. (Bolivia), and *S. yalusay* Cabrera (Peru) have rather smaller heads with phyllaries 4–5 mm long, and, besides some other particular features, all have a more or less abundant lanate or arachnoid indument of thin, long, entangled trichomes which is completely lacking in *S. dolichodoryius*.

Few other species should probably join this section *Dendrophorbium*, and further study is necessary to improve the knowledge of its above-mentioned taxa. Many of those species are still only partially known through fragmentary specimens lacking complete mature vegetative leaves and branches. Much research is also needed on floral characters in order to help to define the limits of the sections and the closely related genera, like *Pentacalia*, into which the section *Dendrophorbium* might well be merged.

*Senecio kingbishopii* Cuatr. sp. nov.

Suffrutex ad 1.5 m altus profuse ramosus et foliatus aspectu cinerascens. Rami ramulique alterni copiosi argute angulati vel striati densiuscule subadpresseque lanugineo-arachnoidei cinerei. Folia alterna cum lamina sessili crassiuscula lanceolato-oblonga apice acuta basi plus minusve ampliata auriculato-amplexanti, margine repando denticulata dentibus minutis mucroniformibus patulisque plana vel interdum revoluta; 40–60 × 4–13 mm; adaxiale tenuiter lanugineo-arachnoidea tantum costa magis lanata notata; abaxiale crasse densiuscule subadpresseque lanata pilis tenuissimis intricatis, costa infra indumentum prominenti striata sed leviter conspicua cum vestimento tecta, reliquis nervis obsoletis.



Inflorescentiae terminales corymbiforme paniculatae valde ramosae inferne foliatae et bracteosae, ramis ramusculisque striatis lanuginoso-cinereis. Folia subtendentes vel bracteae proximales hastato-lanceolatae, 5–2.5 cm longae 12–8 mm latae. Ramuli ultimi et pedicelli (1–8 mm longi) rigidi striati paulo arachnoidei plus copiosis pilis pluricellularibus crassiusculis tortuoso-flexuosis brunnescentibus valde conspicuis. Bracteae et bracteolae distales breves lineares acutae.

Capitula discoidea cylindracea 10–11 mm alta circa 6 mm diametro. Involucrum circa 9 mm longum, expansum 17–19 mm diam., viridi-grisaceum. Phyllaria 13–14(–17) in capitulo tenuiter herbaceo-membranacea exteriora 8–9 × 1.2–1.5 mm, interiora 8 × 2 mm ad marginem late scariosa, omnia oblonga cum apice subite acutato et papilloso-piloso, abaxiale pilis albis strictissimis lanugineo-arachnoideis et pilis crassiusculis brunnescentibus flexuoso-tortuosis circa 1.5 mm longis valde motatis. Bracteolae calyculi 4–6 lineares vel anguste triangulares 2.5–5 mm longae etiam pubescentes. Receptaculum 2–2.5 mm diametro planum alveolatum alveolis pentagonalibus moderate profundis marginibus ad angulos dentibus triangulari-acutis.

Flores omnes hermaphroditi 27–45 in capitulo. Corolla lutea 6.5–7 mm longa glabra, tubulo circa 2.5 mm, limbo tubuloso sursum gradatim leviterque ampliato, lobis triangulare oblongis 0.8–1 mm longis apice marginibusque paulo incrassatis et minute papillosis. Antherae circa 2 mm basi attenuatae obtusaeque, appendice apicale oblonga 0.2–0.3 mm longa. Collum album crassum 0.5–0.7 mm longum cellulis quadratis longiseriatis. Ramuli styli curvati adaxiale lineis duobus stigmaticis marginalibus crassiusculis, apice obtuso minute papilloso cum papillis marginalibus longioribus patentibus radiatis. Ovarium circa 1.5 mm longum oblongum plus minusve conspicue 10-nervatum. Papus albus 6 mm longus pilis uniseriatis strictis acutis strigulosis.

*Type.* — Peru, Depto. Cajamarca: 62 km NE of Cajamarca along the road to Celendín, 10,000 ft. elevation; shrub ½ m tall, flowers yellow, 9 Jan 1983, *Robert M. King & L. Earl Bishop 9144* (US, holotype).

*Remarks.* — *Senecio kingbishopii* is closely related to *S. flaccidifolius* Wedd. from which it differs by the auriculate, amplexant leaves and by the lanate and arachnoid indument with additional thicker, brownish, flexuose, pluricellular trichomes which are conspicuous on branchlets and inflorescences.

*Senecio albotectus* Cuatr. Feddes Repert. 55(2/3):130. 1953.

This species had been erroneously transferred by the author to *Pentacalia* (Phytologia 49(3):252. 1981). It is to be kept in the genus *Senecio* and its section *Latiflorus*, as it was suggested in the original publication (l.c. pag. 131).

*Cabreriella oppositicordia* (Cuatr.) Cuatr., comb. nov.

*Senecio oppositicordius* Cuatr. Feddes Repert. 55(2/3):142–143. 1953.

*Type.* — *Grant 10862* (F, holotype; US, isotype).

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